

LISTING OF CLAIMS

The listing of claims provided below replaces all prior versions, and listings, of claims in the application.

5 1. (Previously Presented) A method for monitoring a data center, the method comprising:

transmitting an identifiable acoustic signal from a transmitter device defined on a source within a data center;

10 receiving the acoustic signal from the transmitter device defined on the source by at least two sensors;

processing the received acoustic signal using data from the at least two sensors to identify an approximate physical location of the source; and

reporting the physical location of the source over a network.

15 2. (Previously Presented) A method for determining a physical location of a source, the method comprising:

receiving an acoustic signal from a source placed within an acoustic monitoring area;

20 processing a received acoustic signal, the processing using data from at least two sensors;

identifying an approximate localized point in the acoustic monitoring area, the approximate localized point defining a physical location of the source; and

reporting the physical location of the source over a network, wherein the source is a computer system or a rack including the computer system.

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3. (Previously Presented) A method for determining a physical location of a source, the method comprising:

receiving an acoustic signal from a source placed within an acoustic monitoring area;

5 processing a received acoustic signal, the processing using data from at least two sensors;

identifying an approximate localized point in the acoustic monitoring area, the approximate localized point defining a physical location of the source; and

10 reporting the physical location of the source over a network, wherein the acoustic monitoring area is a data center.

4. (Original) A method as recited in claim 1, wherein each sensor of the at least two sensors is a microphone.

15 5. (Previously Presented) A method as recited in claim 1, wherein the operation of processing the received acoustic signal is an arrival-time correlation process, distributed sensor/time of flight process, or an echolocation process.

20 6. (Original) A method as recited in claim 1, wherein the approximate locale of the source is determined by an acoustic signal processor.

7. (Original) A method as recited in claim 1, wherein the physical location of the source is reported out-of-band.

8. (Original) A method as recited in claim 7, wherein the physical location of the source is reported using wireless technology.

9. (Previously Presented) A localizing system for determining a physical location of a source, the localizing system comprising:

an acoustic environment configured to include the source, wherein the acoustic environment is a data center;

a transmitter device for transmitting streams of identifiable acoustic signals, the transmitter device being defined on the source;

at least a pair of compact sensors for detecting and capturing the streams of acoustic signals transmitted by the transmitter device; and

a signal processor for receiving and processing captured streams of acoustic signals so as to ascertain the physical location of the source.

10. (Previously Presented) A localizing system as recited in claim 9, wherein the physical location of a rack is ascertained using an arrival-time correlation process.

11. (Original) A localizing system as recited in claim 9, the localizing system further comprising:

a computer console for processing and displaying a location of the source in the acoustic environment.

12. (Original) A localizing system as recited in claim 9, wherein the pair of compact sensors is a pair of microphones.

13. (Cancelled)

14. (Previously Presented) A localizing system as recited in claim 9,
5 wherein the data center includes a plurality of structures each including a system site,
each system site including a plurality of racks, each rack including a plurality of
computer systems.

15. (Original) A localizing system as recited in claim 14, wherein each
10 system site includes a signal processor.

16. (Original) A localizing system as recited in claim 15, wherein each
signal processor is defined on a central location in each system site.

15 17. (Currently Amended) A method for ascertaining a physical location of a
failed computer system in a data center, the method comprising:
receiving a failure report from the failed computer system;
transmitting streams of acoustic signals;
capturing transmitted streams of acoustic signals; ~~and~~
20 processing the transmitted streams of acoustic signals so as to determine the
physical location of the failed computer system; and
reporting the physical location of the failed computer system.

18. (Cancelled)

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19. (Original) A method as recited in claim 17, wherein the operation of receiving the failure report from the failed computer system includes,
generating the failure report by the failed computer system; and
communicating the failure report of the failed computer system.

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20. (Original) A method as recited in claim 19, wherein the failure report is communicated out-of-band to a signaling circuitry.

21. (Original) A method as recited in claim 17, wherein the operation of
10 transmitting streams of acoustic signals includes,
defining an acoustic signal emitter on an outer surface of a rack including the failed computer system; and
generating streams of acoustic signals having identifiable characteristics.

15 22. (Original) A method as recited in claim 17, wherein the operation of capturing the transmitted streams of acoustic signals includes,
receiving streams of acoustic signals;
identifying streams of acoustic signals having identifiable characteristics; and
capturing transmitted streams of acoustic signals having identifiable
20 characteristics.

23. (Original) A method as recited in claim 17, wherein the operation of processing transmitted streams of acoustic signals so as to determine the physical location of the failed computer system includes,
25 sending transmitted streams of acoustic signals to a signal processor;

converting the transmitted streams of acoustic signals; and

executing converted streams of acoustic signals by a computer software so as to
determine the physical location of the failed computer system.

5 24. (Original) A method as recited in claim 23, wherein the physical
location of the failed computer system is determined using an arrival-time correlation
process.

 25. (Original) A method for generating a sonic map of a data center, the
10 method comprising:

 for each system site in the data center,

 defining an acoustic signal processor on a central location of the system
site; and

 for each rack in the system site,

15 placing an acoustic signal emitter on a rack; and

 for each computer system in the rack,

 generating an identifiable signal;

 communicating the identifiable signal to the rack;

 transmitting associated streams of acoustic signals;

20 capturing transmitted streams of acoustic signals by the
acoustic signal processor;

 processing transmitted streams of acoustic signals; and

 displaying a locality of the computer system generating the
identifiable signals.

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